INTEGRAL/IBIS detection of hard X-ray activity from the HMXB 4U 1036-56

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Subjects: X-ray, Binary, Neutron Star

The Be high mass X-ray binary (HMXB) 4U 1036-56 has been recently detected by INTEGRAL/JEM-X during enhanced activity in the soft X-ray band 3-10 KeV (ATel #8425). On the contrary no emission was detected by INTEGRAL/IBIS in the band 22-60 keV, leading to a 3sigma upper limit of 6 mCrab.

INTEGRAL recently performed further observations in the direction of 4U1036-56 starting from 15 Dec 16:56 (UTC) to 17 Dec 20:43 (UTC). The source was detected by IBIS/ISGRI in the energy band 22-60 keV at 6.8 level (6.3 ks of effective exposure time) with an average flux of 12.5+/-1.8 mCrab (22-60 keV). The source was never in the field of view of JEM-X monitor during this observation.

The IBIS/ISGRI spectrum is reasonably fitted by a power law with photon index 2.3+/-0.8. The average flux is 1.8 x 10^{-10} erg cm^{-2} s^{-1} (18-60 keV) which, at the 5 kpc source distance, translates into a luminosity of 5.4 x 10^{35} erg s^{-1}.

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